WHAT IS CLAIMED IS:

Sub A'

1. A method for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said operating parameters being related to at least one control parameter of said element, said method comprising:

receiving information relating to characteristics associated with a first subset of the plurality of network elements; and

providing at least a portion of said received information to at least one analysis entity for analyzing said portion of received data.

2. A computer program product comprising a computer readable medium having computer code embodied therein for implementing the method of claim 1.

3. The method of claim 1 further including receiving updated control information in response to said information, said control information being usable by at least one network element to affect operation of said element.

4. The method of claim 3 wherein said analysis entity is a policy engine operable to analyze said portion of said information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with predetermined criteria.

5. The method of claim 3 further including providing said received updated control information to an event notification system.

6. The method of claim 5 further including automatically notifying said network element of said updated control information using said event notification system.

7. The method of claim 3 wherein said updated control information is received from said analysis entity.

8. The method of claim 7 further including providing said updated control information to said network element to thereby affect the operation of the network element.

9. The method of claim 7 further including providing said updated control information to said network element to thereby affect at least one operating parameter of said element, said affected operating parameter being associated with said received information.

10. The method of claim 1 further including providing control data to a second subset of the plurality of network elements in response to the information, the control data being for affecting operation of the second subset of network elements according to predefined criteria.

11. The method of claim 10 further comprising modifying the predefined criteria in response to the information.

12. The method of claim 1 wherein the information is compiled by the first subset of network elements.

13. The method of claim 1 wherein the information is received periodically.

14. The method of claim 1 wherein the information is received aperiodically in response to changes in the operating parameter information associated with the first subset of network elements.

15. The method of claim 1 wherein the second subset of network elements comprises the first subset of network elements.

16. The method of claim 1 wherein the first subset of network elements comprises a first network element, and the second subset of network elements comprises a second network element.

17. The method of claim 10 wherein the first and second network elements are part of a data transmission path, the second network element being upstream from the first network element, the operating parameters associated with the first network element representing data congestion in the first network element, the control data transmitted to the second network element controlling the second network element to thereby ameliorate the congestion in the first network element.

18. The method of claim 10 wherein receiving the information and providing the control data are performed by a single network controller.

19. The method of claim 10 wherein receiving the information and providing the control data are performed by a plurality of network controllers.

20. A method for providing dynamic feedback control of network elements in a data network, the data network including a plurality of network elements, each of said network elements having a plurality operating parameters associated therewith, said operating parameters being related to at least one control parameter of said element, said method comprising:

receiving information from a first subset of network elements;

receiving updated control information associated with at least one network element based upon said received information; and

providing said updated control information to at least one network element to thereby affect operation of said element.

21. A computer program product comprising a computer readable medium having computer code embodied therein for implementing the method of claim 20.

22. The method of claim 20 further including providing at least a portion of said received information to at least one analysis engine.

23. The method of claim 22 wherein said updated control information is received from said analysis engine in response to an analysis of portion of information.

24. The method of claim 20 further including providing said updated control information to an event notification service to notify said element of an existence of said updated control information.

25. The network of claim 20 wherein said network is a frame relay network.

26. The network of claim 20 wherein said network is an ATM network.

27. An adaptive feedback system in a data network, the network including a plurality of network elements, at least one network element having a plurality operating parameters associated therewith, said operating parameters being related to at least one control parameter of said element, the feedback system comprising:

at least one CPU;

a first interface for receiving information relating to characteristics associated with a first subset of the plurality of network elements;

a second interface for providing at least a portion of said received information to at least one analysis entity for analyzing said portion of received data; and

a first memory for storing said information.

28. The feedback system of claim 27 wherein:

said second interface is operable to receive updated control information from said analysis entity, said control information being usable by at least one network element to affect operation of said element; and wherein

said feedback system includes a second memory for storing said updated control information.

29. The feedback system of claim 28 wherein said analysis entity is a policy engine operable to analyze said portion of said information based upon selected guidelines to determine whether a performance of at least a portion of said network conforms with predetermined criteria.

30. The feedback system of claim 28 further including a third interface for providing said received updated control information to an event notification system.

31. The feedback system of claim 30 further including means for automatically notifying said network element of said updated control information using said event notification system.

32. The feedback system of claim 28 wherein said first interface is further operable to provide said updated control information to said network element.

33. The feedback system of claim 27 wherein said first interface is implemented using a directory access protocol.

34. The feedback system of claim 27 wherein said second interface is implemented as a Java Naming and Directory Interface (JNDI).

35. The network of claim 27 wherein said network is a frame relay network.

36. The network of claim 27 wherein said network is an ATM network.

37. A network controller for generating control signals which affect operation of a plurality of network elements in a network, the network controller comprising:

a network interface for transmitting the control signals to the plurality of network elements and receiving information transmitted from the plurality of network elements, the information being related to characteristics associated with the plurality of network elements;

memory for storing the information;

a processing unit for generating the control signals in response to the information, the control signals being for affecting operation of the plurality of network elements according to predefined criteria.

38. The network controller of claim 37 further including an event handling entity operable to receive event notification information relating to at least one network element.

39. The network controller of claim 38 wherein said event handling entity is further operable to report errors detected by said network controller to an event notification server.